**<u>SPECIFICATION AMENDMENTS</u>**

On page 22, please replace the first full paragraph with the following:

--In accordance with a fifth aspect of the present invention, an assembly for use in containing a fluid undergoing pumping or mixing is provided. The assembly comprises a vessel formed of a flexible disposable material capable of holding a fluid and a magnetic bearing positioned in the vessel. Thus, when used in conjunction with a pumping ~~of~~ <u>or</u> mixing system wherein the magnetic bearing is levitated in the vessel by an adjacent superconducting element, both the vessel and the bearing can be disposed of when the pumping or mixing operation is complete and the fluid is recovered. While not an exhaustive list, the vessel can be selected from the group of an open-top container, a pipe, a container having an inlet for receiving a flow of fluid and an outlet for expelling a flow of fluid, a sealed container, or a flexible bag. An attachment or cover containing a coupler comprised of a ferromagnetic material or the like may also be provided to keep the bearing in the proper position relative to the bag or vessel, such as during shipping or the like.--

On page 28, please replace the last paragraph with the following:

--Figure 9 is a partially cross-sectional, partially schematic side view of a second embodiment of a pumping or mixing system wherein separate levitating and driven magnets are carried on the same, low-profile magnetic bearing, with the levitation being supplied by

a thermally isolated superconducting element and the rotary motion being supplied by a motive device including driving magnets coupled to a rotating shaft and positioned in an opening in the evacuated or insulated chamber for housing the superconducting element;--

On page 32, please replace the paragraph beginning at line 9 with the following:

--In this first illustrated embodiment, the cooling source 24 is a separate, substantially contained cooling chamber 26 holding a cryogen C, such as liquid nitrogen. The chamber 26 is defined by an outer wall 28 that is substantially thermally separated from the outer wall 18 of the cryostat 12 to minimize heat transfer. An inlet I is provided through this wall 28 for introducing the cryogen into the cooling chamber 26. To permit any vapor P to escape from the chamber 26 as the cryogen C warms, an exhaust outlet O is also provided (see action arrows in Figure 1 also designating the inlet and outlet). In the illustrated embodiment, the inlet I and outlet O lines may be formed of a material having a low thermal conductivity, such as an elongate, thin walled tube formed of non-magnetic stainless steel, and are sealed or welded in place to suspend the cooling chamber 26 in the cryostat 12. As should be appreciated by one of ordinary skill in the art, the use of a thin walled tube formed of a material having a low thermal conductivity, such as stainless steel, results in a negligible amount of thermal transfer from the inlet or outlet to the wall 18. The sealing or welding method employed should allow for the chamber 25 to be maintained in an evacuated state,

if desired. Despite this illustration of one possible support arrangement, it should be appreciated that the use of any other support means that minimizes thermal transfer between the cooling chamber 26 and the cryostat wall or other housing 18 is also possible.--

On page 40, please replace the paragraph beginning at line 14 with the following:

--As should be appreciated, it is possible to rearrange the components of the system 10 such that the levitation and driving forces are provided from other areas of the vessel, rather than from the top and bottom of the vessel. Thus, as shown in Figure 4c, the cryostat 12 or other housing for containing the superconducting element 20 may be positioned adjacent to one side of the vessel 16, while the drive magnet 40 is positioned adjacent to the opposite side. In that case, the bearing 14 may be turned on its side and supported by a separate stable support structure, such as a table T or the like. The vessel ~~14~~ 16 is shown as being sealed, but it should be appreciated that any of the vessels disclosed herein may be employed instead, including even a pipe.--

On page 41, please replace the first paragraph with the following:

--To assist in levitating the bearing 14 in either the embodiment of Figures 1 or 2 or the other embodiments disclosed herein, at least one, and preferably a plurality of chambers 60 are provided for containing a substance that is lighter than the surrounding fluid F. The

chambers 60 may be provided adjacent to each magnet 32, 38 in the bearing 14, as well as around the shaft 34, if desired. In the preferred embodiment where the fluid F is or has a specific gravity similar to that of water, the substance contained in the chambers 60 may be air. However, in more viscous fluids, such as those having a specific gravity more like glycerin, it may be possible to use lighter fluids, such as water, even lighter gases, or combinations thereof. These chambers 60 thus serve to assist in levitating the bearing 14 by helping it "float" in the fluid F. However, the "pinning" force created by the superconducting element 20, plus the levitating and aligning force created between the second permanent magnet 38 and the driving magnet 40, both also serve to assist in keeping the bearing 14 in the proper position as it rotates. In the case of disk or pancake shaped permanent first and second magnets 32, ~~48~~ 38 and a cylindrical shaft 34, each chamber 60 is preferably annular. Instead of fluid-filled chambers, the use of other buoyant materials is also possible to provide the levitation-assist function.--

On page 45 bridging over to page 46, please replace the paragraph with the following:

--The superconducting element 106 is supported in the chamber 108 independent of the outer wall 104 of the first portion 102a of the cryostat 102. The support may be provided by a platform 116 that is in turn enclosed by wall 104 and supported at one end of an elongated thermal link 118, preferably formed of metal or another material having a high

degree of thermal conductivity (e.g., 50 Watts/Kelvin or higher). To supply the necessary cooling to the superconducting element, the opposite end of the elongated thermal link 118 is positioned in contact with the cooling source 110, which as described above forms a part of the second component 102b of the "cryostat" 102 (the term cryostat being used throughout to denote a structure or combination of structures that are capable of holding and maintaining a superconducting element in a cold state, whether forming a single unit or not). The cooling source 110 is illustrated as an open-top container 119, such as a Dewar flask, containing a liquid cryogen C, such as nitrogen. However, it is also possible to use a closed-cycle refrigerator or any other device capable of supplying the cooling necessary to levitate a magnet above a superconducting element after field cooling is complete. In the case where the wall 104 of the first portion 102a of the cryostat 102 makes contact with the cryogenic fluid C, as illustrated, it should be appreciated that there is only negligible thermal transfer to the portion of the wall 104 adjacent the vessel 132, since: (1) the wall 104 may be formed of a thin material having low thermal conductivity; and (2) the portion of the wall 104 adjacent to the vessel is surrounded by the ambient, room-temperature environment.--

On page 46 bridging over to page 47, please replace the paragraph with the following:

--To permit the superconducting element 106 to rotate, a roller bearing assembly 120 comprising one or more annular roller bearings 122 supports the first portion of the cryostat

102a, including the wall 104 defining the chamber 108. As should be appreciated from viewing Figure 5, these roller bearings 122 permit the first portion of the cryostat 102a housing the superconducting element ~~102~~ 106 to rotate about an axis, which is defined as the axis of rotation. A bearing housing 124 or the like structure for supporting the bearing(s) 122 is secured to an adjacent stable support structure 126. In the illustrated embodiment, a motive device includes an endless belt 128 that serves to transmit rotational motion from the pulley 129 keyed or attached to the shaft 130 of a motor 131 to the first portion of the cryostat 102a. The motor 131 may be a variable speed, reversible electric motor, but the use of other types of motors to create the rotary motion necessary to cause the superconducting element 106, and more particularly, the first portion of the cryostat 102a housing the superconducting element 106, to rotate is possible.--

On page 51, please replace the first full paragraph with the following:

--As should be appreciated, one advantage of providing the driving force for the levitating bearing 158 from the same side of the vessel/pumping head 150 from which the levitating force originates is that the fluid inlet 154 (or outlet 156, in the case where the two are reversed) may be placed at any location along the opposite side of the vessel/pumping head 150, including even the center, without interfering with the pumping or mixing operation. Also, this same side of the vessel/pumping head 150 may be frusto-conical or

otherwise project outwardly, as illustrated, without interfering with the driving operation or necessitating a change in the design of the magnetic bearing ~~134,~~ 158.--

On page 52, please replace the first paragraph with the following:

--A second version of a bearing 134b for use with a vessel having a narrow opening is shown in Figure 8b. The bearing 134b includes first and second thin rods 180 formed of a matrix material M. The rods 180 each carry the levitating/driven magnets 135a, 135b at each end thereof, with at least two magnets having the identical polarity being held on each different rod. In one version, the rods 180 are pinned about their centers (note connecting pin 182) and are thus capable of folding in a scissor-like fashion. As should be appreciated from Figure 8c, this allows the bearing 134b to be folded to a low-profile position for passing through the opening of the vessel ~~124~~ 132. The rods ~~182~~ 180 of the bearing 134b may then separate upon coming into engagement with the rotating superconducting element 106 positioned adjacent to the bottom of the vessel 132. Since magnets 135a or 135b having the same polarity are positioned adjacent to each other, the corresponding ends of the rods 180 repel each other as the bearing ~~132b~~ 134b rotates. This prevents the rods 180 from assuming an aligned position once in the vessel 132. As should be appreciated, instead of pinning two separate rods 180 together to form the bearing 134b, it is also possible to integrally mold the rods 180 of a flexible material to form a cross. This would permit the rods 180 of the bearing

134b to flex for passing through any narrow opening, but then snap-back to the desired configuration for levitating above the superconducting element 106.--

On page 61, please replace the paragraph beginning at line 13 with the following:

--As should now be appreciated, the bearing 302 is caused to levitate in the pipe 304 as a result of the interaction of the levitation magnets 305a, 305b with the adjacent superconducting elements ~~310a, 310b~~ 312a, 312b, which may be thermally separated from the outer surface of the pipe 304 (or the adjacent inner wall of the cryostat 310a, 310b, if present). Upon then rotating the magnetic drive assembly 320, the bearing 302 is caused to rotate in the pipe 304 serving as the vessel to provide the desiring pumping or mixing action. Even if the fluid F is flowing past the magnetic bearing 302, it remains held in place in the desired position in the pipe 304 as a result of the pinning forces created by the superconducting elements ~~310a, 310b~~ 312a, 312b, acting on the levitation magnets 305a, 305b.--

On page 70, please replace the paragraph beginning at line 16 with the following:

– – Additionally, the outer wall 18 of the cryostat 12 or other housing defines a chamber 25 that thermally isolates and separates the superconducting element 20 from the vessel 16 containing the fluid F and magnetic bearing 14. The thermal isolation may be

provided by evacuating the chamber 25, or filling it with an insulating material. By virtue of this thermal isolation and separation, the superconducting element 20 can be positioned in close proximity to the outer wall or housing 18 adjacent to the vessel 16 and magnetic bearing 14, thereby achieving a significant reduction in the separation distance ~~or gap G~~ between the magnetic bearing 14 and the superconducting element 20. This enhances the magnetic stiffness and loading capacity of the magnetic levitating bearing 14, thus making it suitable for use with viscous fluids or relatively large volumes of fluid. --